An interactive Decision Support System for marine shoreline characterization

Anthony Gabriel*, David Cordner, David Parrish, Central Washington University Cinde Donoghue, Tim Gates, WA Dept of Ecology

Keywords: decision support system, coastal geomorphology, shoreline managment, shoreline characterizatioin, land use

In an effort to assist local planners in addressing requirements of Washington's new Shoreline Guidelines, we developed an interactive Decision Support System (DSS) that guides the user through an approach to characterize marine shorelines. By stepping through examples illustrated with maps and images, the user is provided with a demonstration of how relevant physical, biological and cultural information may be used to inform local shoreline management. The DSS is intended to characterize existing shoreline conditions, and identify restoration and protection opportunities. The DSS can be viewed on any web browser (e.g. Internet Explorer, Netscape, Mozilla), and is accessible via compact disk or web interface. It primarily consists of: 1) direct links to necessary data and technical reports; 2) explanations of how to interpret, organize and use existing information effectively; and 3) illustrated case examples of marine shoreline assessments in Washington State. The examples consist of maps and text built around the ecological structure and functions of the shorelines, documenting the major issues of concern (e.g. water quality, erosion/flooding hazards, habitat and preservation of wetlands and shoreline buffers). The examples of shoreline assessments provide managers with spatial analogues that they can use to guide their own shoreline characteriztions.